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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,175	11/21/2003	Frank Richter	PO-7863/LeA 36,425	2346

157 7590 06/09/2005

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EXAMINER

NYALLEY, LANSANA

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 06/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/719,175	Applicant(s) RICHTER ET AL.	
	Examiner Lansana Nyalley	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-11 and 13 is/are rejected.
- 7) ☒ Claim(s) 2,3,6 and 12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

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Claims 1-13 are pending.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 1, 4-5, 7-11, 13 is rejected under 35 U.S.C.103(a) as being unpatentable over Sandridge (EP 1,244,416).

WHAT APPLICANTS CLAIM.

Applicants recite a method of dimerizing isocyanate comprising reacting isocyanate functional compounds in the presence of phosphines containing at least one cycloaliphatic radical attached directly to phosphorus as catalysts resulting in the formation of uretdiones.

**DETERMINATION OF THE SCOPE AND THE CONTENT OF THE
PRIOR ART (M.P.E.P. 2141.01).**

Sandridge teaches a method of preparing polymeric isocyanate containing one or more isocyanate by reacting isocyanate functional compound in the presence of a phosphine containing a cycloaliphatic radical directly attached to phosphorus atom as catalyst resulting in the formation as uretdione.

**ASCERTAINMENT OF THE DIFFERENCE BETWEEN THE PRIOR ART
AND THE CLAIMS (M.P.E.P. 2141.02).**

Though Sandridge broadly teaches the use of a phosphine containing a cycloaliphatic radical attached to a phosphorus atom, the difference between Sandridge and the claims of the instant application is that Sandridge does not exemplify the use of a phosphine containing a cycloaliphatic radical attached to a phosphorus atom nor does he specifically teach that the amount of the catalyst to used be in the amount from 0.01 to 3 mol %..

**FINDING OF PRIMA FACIE OBVIOUSNESS-RATIONAL AND
MOTIVATION (M.P.E.P. 2142-2143).**

Sandridge suggests a cycloaliphatic radical connected to the phosphorus atom with a double bond when he teaches that it is possible to have two alkyl groups linked together to form a ring that is attached to the phosphorus atom (see column 3, lines 1-9).

The amount of the catalyst taught by Sandridge, 0.001 to 10.0% by weight (column 3, lines 13-17), is inherent in the amount of the catalyst recited by the claims of the instant application: 0.01 to 3 %.. Besides varying the moles of reactants in a chemical reaction in order to optimize the reaction result is a skill well within the reach of one of ordinary skill in the art.

Therefore, it would have been obvious to one of ordinary skill in art at the time the invention was made to have looked to the teaching of Sandridge in order to make a polyisocyanate. One of ordinary skill in the art would have been motivated to do so in order to produce uretdiones useful as light stable adhesives, lacquers, elastomers and foams.

Base on the above, Sandridge teaches the elements of the claimed invention with sufficient guidance, particularity and with reasonable expectation of success that the invention would be prima facie obvious to one of ordinary skill (Sandridge. teaches or suggests all the claim limitations with reasonable expectation of success). (See M.P.E.P. 2143).

Allowable Subject Matter

Claims 2-3, 6 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent forms including all of the limitations of the base claim and any intervening claims.

Claims 2-3, 6 and 12 are allowable over Sandridge because Sandridge does not teach the use of a phosphine in which the phosphorus atom is attached to a cycloaliphatic radical with a single bond nor does he teach a catalyst comprising dibutyltin dilaurate.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lansana Nyalley whose telephone number is 571,272,0697. The examiner can normally be reached on 7:45 to 4:45.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571 272 0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300..

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lansana Nyalley, Ph.D.
06- 01- 05



Samuel Barts, Ph.D..
Technology Center 1600.